

RESEARCH DEPARTMENT

RHONDDA U.H.F. RELAY STATION: SUMMARY OF INSTALLATION

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for Head of Research and Development

U.H.F. RELAY STATIONS : SUMMARY OF INSTALLATION

NAME: 106.2 RHONDDA

TYPE: 2

TRANSMISSIONS COMMENCED: (TRADE) 6.5.68 (SERVICE) 20.5.68

SITE DATA

LOCATION: LLWYN-Y-PLA

GRID REFERENCE: SS 989939

HEIGHT, a.o.d. : 315.5 m (1035 ft)

SUPPORT MAST

TYPE: 53.3 m (175 ft) TOWER

OVERALL HEIGHT: 54.2 m (178 ft)

FREQUENCIES

BAND: IV

CHANNELS: 23, 26 (BBC 2)

29, 33 (BBC 1)

RECEPTION

PARENT: WENVOE

CHANNELS: 41, 44 (BBC 1)

47, 51 (BBC 2)

POLARIZATION: HORIZONTAL

AERIALS: 2 x 4 λ TROUGHS

AERIAL HEIGHTS: 25.9 m (85 ft)
28.9 m (95 ft)

TRANSMITTERS

TYPE: (1) TWT, 50 W (2) TWT, 200 W

OPERATING POWER: (1) 50 W
(2) 200 W

TRANSMITTING AERIAL

TYPE: 2 x 4 λ TROUGH ON 311° ETN

1 x 4 λ TROUGH ON 148° ETN

POWER RATIO: See Fig. 1

RADIATING LENGTH: 8λ , 4λ

H.R.P.: Fig. 2

V.R.P.: Fig. 3

MEAN HEIGHT: 50.3 m (165 ft) a.g.l.

FEEDERS

TRANSMITTING: HF - 1 $\frac{5}{8}$

RECEIVING: BICC T 3319

RADIATION CHARACTERISTICS

POLARIZATION: VERTICAL

MEAN E.R.P.: (1) 0.16 kW
(2) 0.64 kW

MAXIMUM E.R.P.: (1) 0.95 kW
(2) 3.80 kW

NOTES:

(1) Initial power

(2) Power increase when station 132, East Devon, comes into operation.

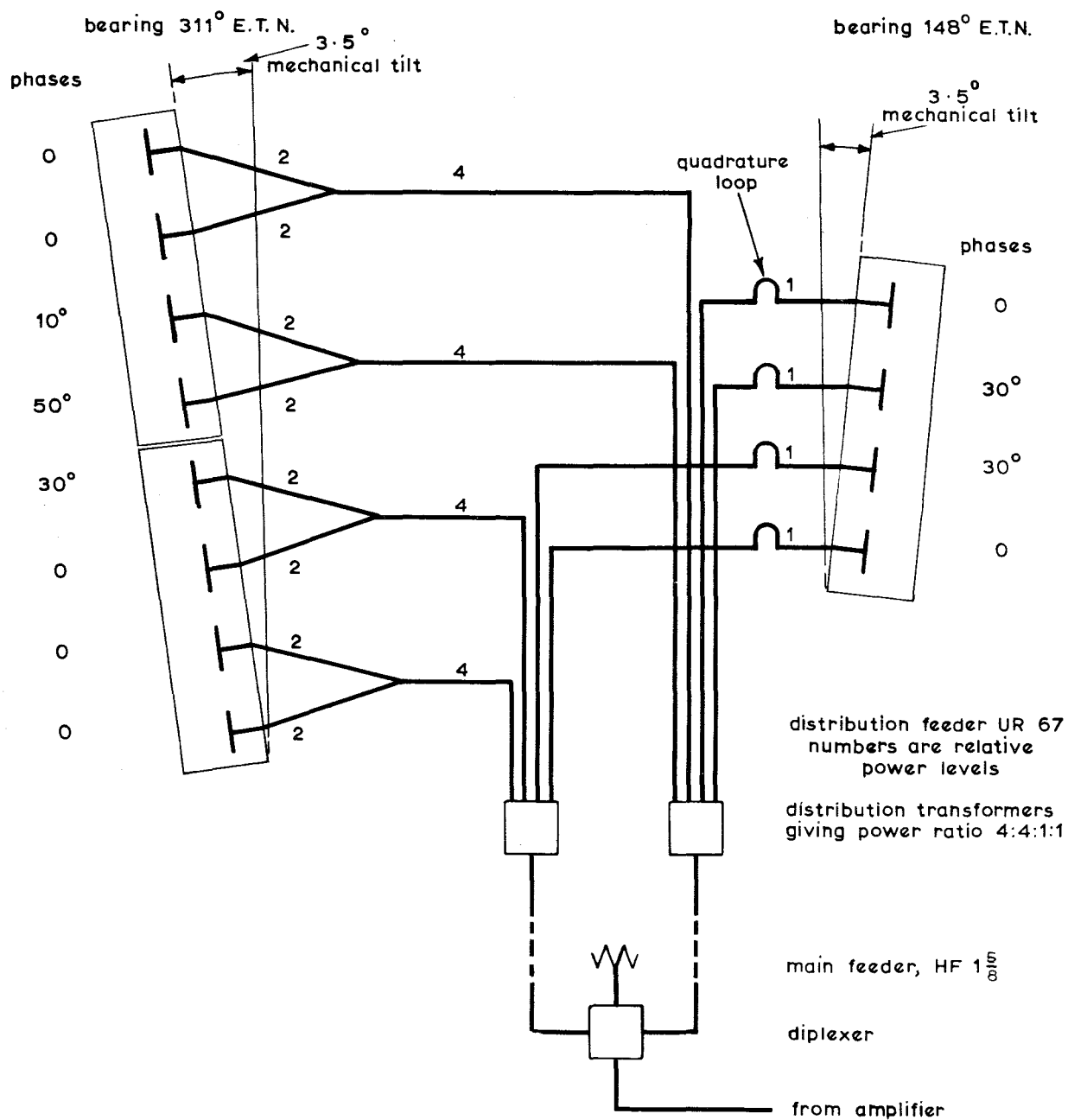
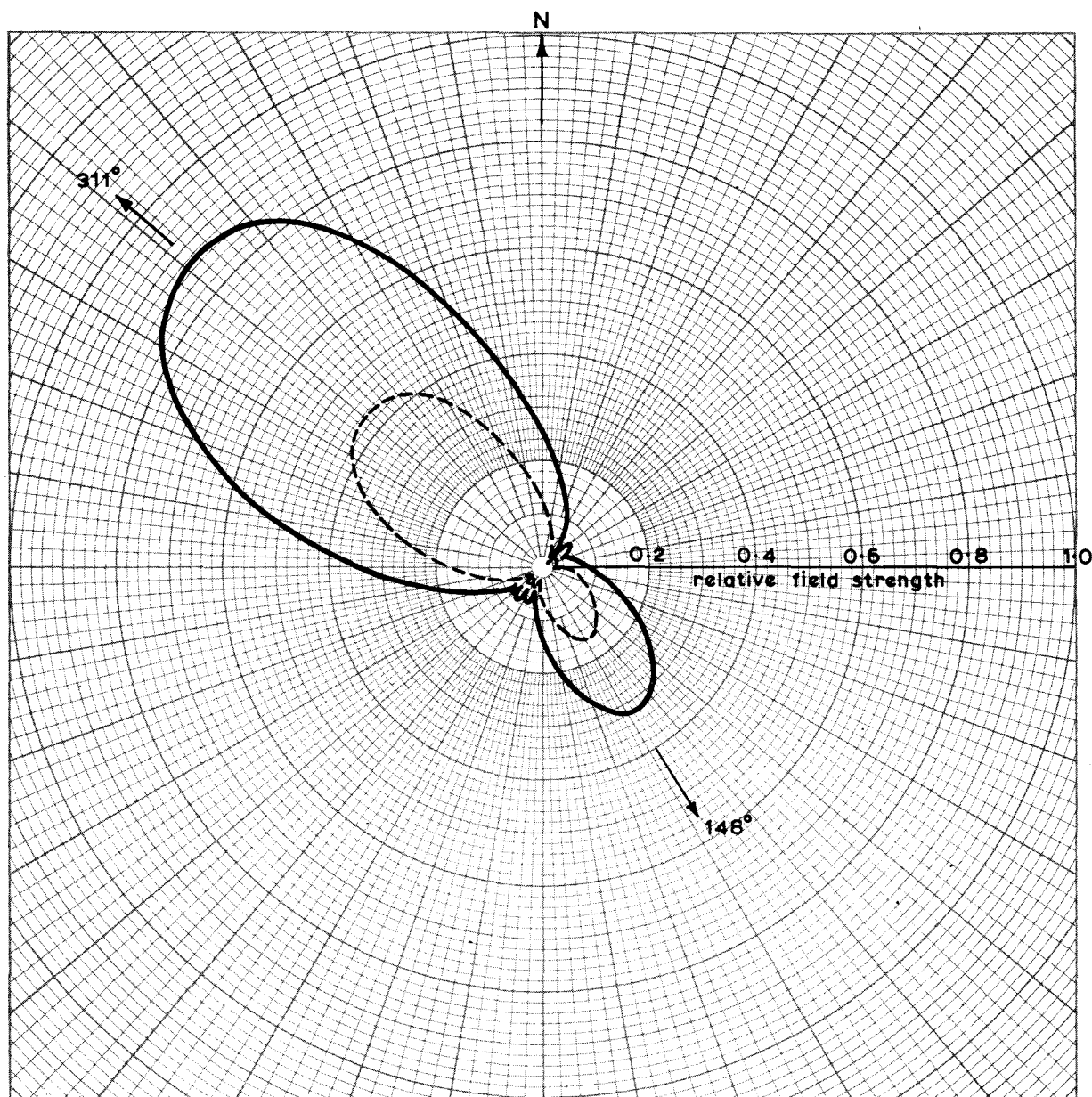


Fig. 1. Schematic arrangement of aerial and distribution feeder.

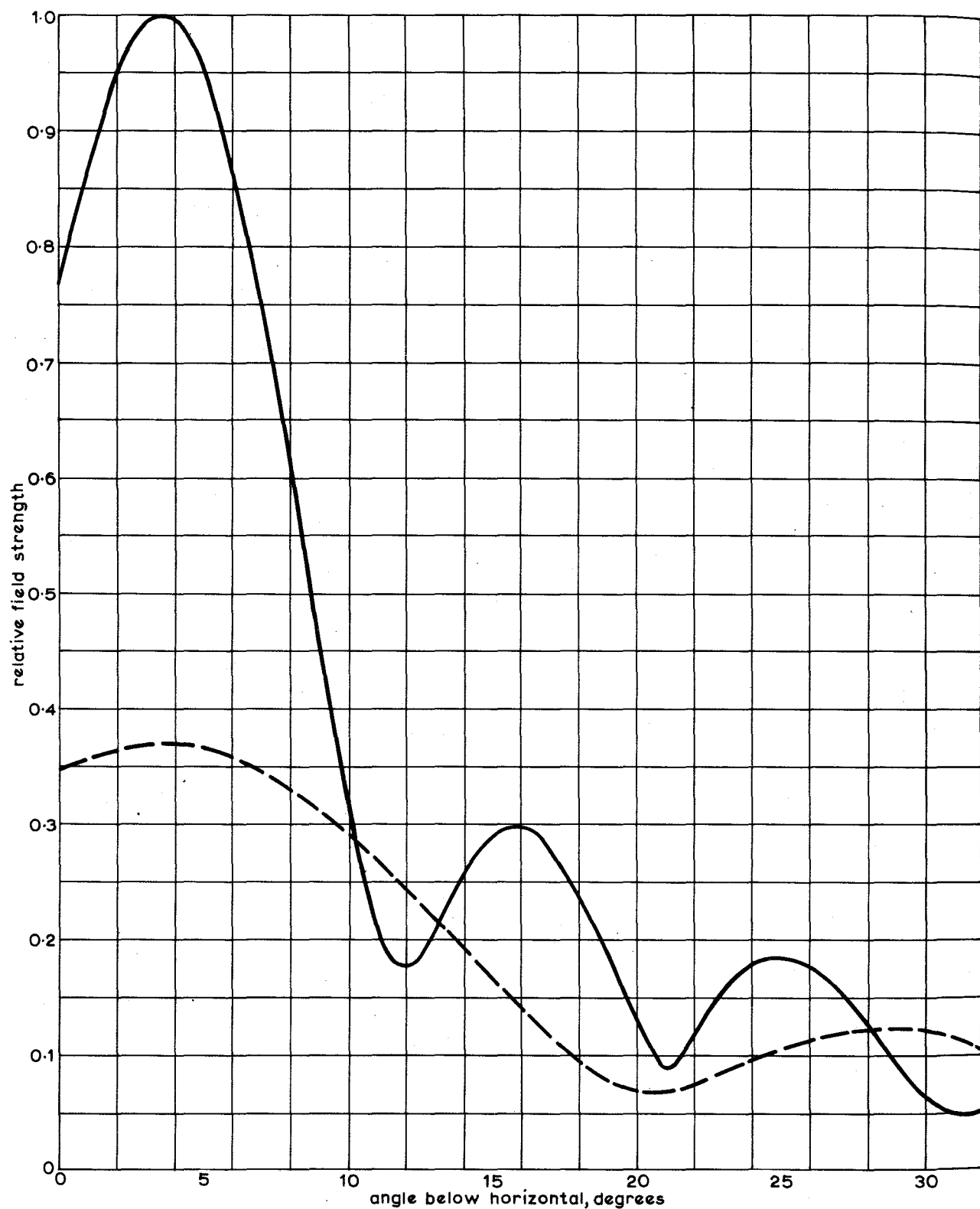


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Fig. 2. Horizontal radiation pattern
VERTICAL POLARIZATION

-----	Transmitter power	0.05kW
	Mean E.R.P.	0.16kW
————	Transmitter power	0.20kW
	Mean E.R.P.	0.64kW

Unit field corresponds to an E.R.P. of 5kW



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Fig. 3. Vertical radiation pattern

——— Bearing 311° E.T.N.
----- Bearing 148° E.T.N.